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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/530,747

05/02/2005

Kengo Akimoto

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DRINKER BIDDLE & REATH (DC)
1500 K STREET, N.W.
SUITE 1100
WASHINGTON, DC 20005-1209

EXAMINER

CARR, DEBORAH D

ART UNIT

PAPER NUMBER

1621

MAIL DATE

DELIVERY MODE

11/26/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/530,747	Applicant(s) AKIMOTO ET AL.	
	Examiner DEBORAH D. CARR	Art Unit 1621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 July 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9, 12, 13 and 16-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 12-13 16-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments see pages 6-7, filed 22 July 2008, with respect to claims 4, 10-13 have been fully considered and are not persuasive. The objection of claims 4, 10-13 has been maintained.

2. Applicant's arguments filed 22 July 2008 regarding claims 16-22, 24, 27-28 rejected under 35 USC§102(b) in view of Higashiyama et al. (US Pat. 6,117,905) have been fully considered but they are not persuasive. Therefore, the rejection has been maintained.

3. Applicant's arguments, see page 8, filed 22 July 2008, with respect to the rejection(s) of claim(s) 1-9, 12-13, 23, 25-26 under 35 USC§102(b) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view EP-957,173 in view of JP - 06/105680.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 16-22, 24, 27-28 rejected under 35 U.S.C. 102(b) as being anticipated by Higashiyama et al. (US Pat. 6,117,905).

Applicant argues the reference does not describe a decrease of ester type sterols. The instant crude oil as amended read as follows:

Claim 16. (Currently Amended) A crude oil comprising a fat or oil having lowered unsaponifiable matter content and/or ester-type sterol content comprising, as a constituent fatty acid, a highly unsaturated fatty acid, characterized in that the **ester-type sterol content of the fat or oil is not more than 0.6% by weight.**

US'905 clearly state starting in col. 2, lines 64-67 thru to col. 3, lines 1-3 the following:

Further, this invention relates to arachidonic acid-containing edible oil originating in microorganisms which contain not more than **0.8% by weight, preferably not more than 0.6% by weight, of unsaponifiable matters,** 20% by weight or more of arachidonic acid, and not more than 0.3% by weight, preferably not more than 0.15% by weight, of 24,25-methylenecholest-5-en-3 .beta.-ol.

As written the amount of ester type sterol in the instant crude can read on 0.0% to 0.6% by weight of the fat or oil. US'905 meet this requirement in two ways:

1. The ester type sterols are contained in the unsaponifiable matter content. US'905 contents not more than 0.6% of unsaponifiable matter. Therefore it is apparent the ester type sterols contained the unsaponifiable matter is also present not more than 0.6%.
2. Since this range reads on "0.0" and US'905 does not list any ester type sterols, their non-presence would read on 0.0 thereby also meeting the "not more than 0.6%" requirement.

As to the crude oil's ability to be used in preparations, US'905 clearly teach the crude or refined oil can be used in foods, pharmaceutical, and therapeutic foods.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-9, 12-13, 16-28 rejected under 35 U.S.C. 103(a) as being unpatentable over EP-957,173 in view of JP-06/105,680.

EP'173 discloses a crude oil with an increased amount of highly unsaturated fatty acid and a decreased amount of ester type sterol produce via culturing oil with a medium containing a nitrogen source.

EP'173 specifically teach using a fermenter, especially culturing fermenter with aeration and agitation or air-lift culturing fermenter for submerged culturing with aeration **to enable production with yields suited for unsaturated fatty acid-containing oils.** This statement teaches the importance of the apparatus used, because by manipulation of the aeration and agitation produced by the culture fermenter one is able to control the type of oil produced. By manipulation of the

culture fermenter oil with an increased amount of highly unsaturated fatty acid and a decreased amount of ester type sterol (see sections [0010] – [0012]) is obtained.

From this disclosure it is evident EP'173 was cognizant of the fact that conditions pertaining to the aeration and agitation within the fermenter were the determining factors to unsaturated fatty acid and ester type sterol production.

JP discloses that by manipulation the diameter of the agitator impeller within a culture tank of a certain diameter one is able to increase the production of cultured cell.

Applicants state that the ratio of the components within the culture fermenter that a crude oil comprising an increased amount of highly unsaturated fatty acid and an increased amount of ester type sterol can be produced.

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to extrapolate that the manipulations performed by EP'173 to obtain increased fatty acid and reduced ester type sterols via culturing in a fermenter were based on the disclosure of JP'680.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **DEBORAH D. CARR** whose telephone number is (571)272-0637. The examiner can normally be reached on Monday-Friday 8:30-5:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel M. Sullivan can be reached on 571-272-0779. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Deborah D Carr/
Primary Examiner
Art Unit 1621

Ddc